

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-006967**Date Inspected:** 02-May-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG and Tower Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Zhao Chensun, Mr. Lu Yang

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

Prior to Caltrans QA Inspectors' concurring with issuance of OBG deck plate closed rib green tag releases a review of the ultrasonic inspection database is performed to verify all closed rib tack weld repair locations have been ultrasonically accepted. Today this QA Inspector, Mr. Paul Dawson, performed data entry of ultrasonic inspection information from the field generated Ultrasonic inspection data sheets onto the common drive computer database for the following OBG deck panels: DP178-001, DP539-001, DP340-002 and DP422-001.

OBG Bay 5

ZPMC issued an "Inspection Notification Sheet" #2903 requesting Caltrans Quality Assurance (QA) to green tag twelve (12) each Orthotropic Box Girder Cable Tray Supports identified as item CTS9. The QA Inspector met with ZPMC QC representative Mr. Xu Hong Min in bay 5 who indicated that the following items are ready for Caltrans visual inspections: CTS9-A, CTS9-B, CTS9-C, CTS9-D, CTS9-E, CTS9-F, CTS9-G, CTS9-H, CTS9-J, CTS9-P, CTS9-T AND CTS9-Y. The QA Inspector performed random visual inspections of the welds on these cable tray supports and identified most of these cable tray supports have at least one weld with various amounts of

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

weld overlap. The QA Inspector showed Mr. Xu Hong Min each of the locations where the welds were visually unacceptable and he had ZPMC workers perform repairs of the welds. The QA Inspector also performed random dimensional inspections of one of the CTS9 cable tray supports and the measurements taken appear to comply with the construction drawing that was at the jobsite. Following completion of the rework the QA Inspector determined the twelve conduit support brackets listed above appear appeared to generally comply with applicable contract documents. Note: No ABF personnel presented this QA Inspector with any green tag document during the time of this inspection or during this shift. The QA Inspector marked a “QA Triangle” on each of these CTS9 assemblies, see the photographs below for additional information.

Tower Bay 11

ZPMC issued an “Inspection Notification Sheet” #2905 requesting QA to perform ultrasonic inspections and to green tag Tower Shear Plate welds WD1-A467-23M-1; WD1-A467-23M-2; WD1-A467-23M-3; WD1-A467-23M-4; WD1-A467-23M-5; WD1-A467-23M-6; WD1-A467-28M-1; WD1-A467-28M-2; WD1-A467-28M-3; WD1-A467-28M-4; WD1-A467-28M-5 and WD1-A467-28M-6. These welds had previously been ultrasonically inspected and accepted by ZPMC inspection personnel. This QA Inspector performed random ultrasonic inspections of these welds and items observed by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on these inspections see the TL6027 Ultrasonic Test Report.

The QA Inspector observed ZPMC welder Ms. Chen Hongxia, stencil 040460 is using welding procedure specification WPS-B-T-2221-B-U3C-S-2 to make submerged arc groove weld NSD1-A112B/H-50A. The QA Inspector observed ZPMC Quality Control personnel monitoring this welding and the QA Inspector observed a welding current of approximately 670 amps and 32.0 volts. The QA Inspector observed ZPMC had preheated the base material using an electric heating element. Items observed on this date appeared to generally comply with applicable contract documents.

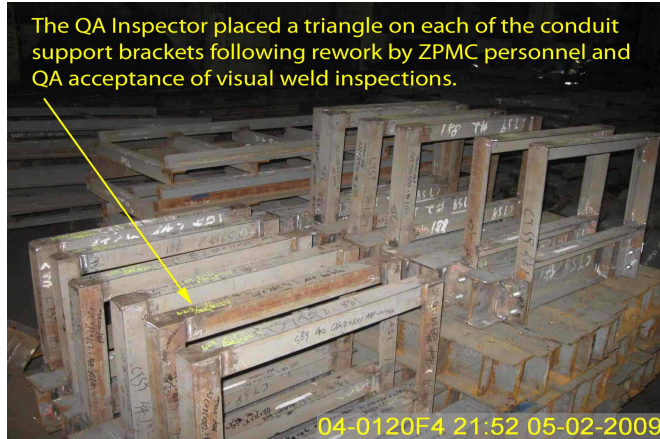
OBG Bay 6

This QA Inspector observed ZPMC welder Mr. Wang Hongbo, stencil 203206 is using shielded metal arc process WPS-B-P-2112-FCM to make fillet tack welds on OBG side plate stiffener weld FB201-012-001. The QA Inspector observed a welding current of approximately 175 amps and the base material where the tack welding is being made had been preheated with a torch. Items observed by the QA Inspector appear to comply with project specifications.

This QA Inspector observed ZPMC welder Mr. Chen Dingding, stencil 048923 is using shielded metal arc process WPS-B-P-2112-FCM to make fillet tack welds on OBG side plate stiffener weld FB208-012-004. The QA Inspector observed a welding current of approximately 170 amps and the base material where the tack welding is being made had been preheated with a torch. Items observed by the QA Inspector appear to comply with project specifications

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



Summary of Conversations:

See above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer
